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ABSTRACT

This report evaluates New York City's Summer High School Preparation for Raising Educational Performance (PREP) program, which was designed to ease Chapter 1-eligible students' transition from junior to senior high school. The report contains the following: (1) an introduction with information on program background, objectives, and methodology; (2) information on program implementation, including staffing, student recruitment, and counseling; (3) assessment of program outcome; (4) results of a student attitude survey; and (5) conclusions and recommendations. Summer PREP operated in 1985 for 22 days at 45 high schools. It targeted incoming ninth and tenth grade students scoring two or more years below grade level on nationally normed reading or mathematics tests, as well as limited English proficient and special education students. Pupils received three hours of instruction daily. Afternoon sessions included trips and other special activities. According to the assessment, PREP's goal that 70 percent of participants demonstrate improvement on norm-referenced reading and mathematics tests was not met. Students' attitudes toward school were initially positive and remained so. It is recommended that recruitment should begin earlier in the spring; use of student mentors should be continued and their roles expanded; and program assessment methods should be reconsidered. (PS)

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1985 HIGH SCHOOL
SUMMER PREP PROGRAM
FINAL REPORT

OEA Evaluation Report

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1985 HIGH SCHOOL SUMMER PREP PROGRAM FINAL REPORT

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SUMMARY

Summer High School Preparation for Raising Educational Performance (PREP) was designed to ease Chapter I-eligible students' transition from junior to senior high school. Summer PREP targets incoming ninth and tenth grade students scoring two or more years below grade level on a nationally normed reading or math test as well as limited English Proficient and special education students. The 1985 summer program operated for 22 days in 45 high schools. Morning sessions were devoted to hands-on instruction developed around themes. Teachers incorporated the themes and their practical applications into students' communication arts and mathematics classes.

Students received three hours of instruction daily. Afternoon sessions included trips, and school-based activities such as shop, clubs, fine arts, and drama productions.

The program's instructional goal that 70 percent of incoming ninth and tenth grade students demonstrate improvement on norm-referenced reading and mathematics tests was not met. Although not explicitly stated as a goal, program administrators expected that students' attitudes toward school would be positively affected by their participation in the program. According to evaluation findings, students' attitudes toward school were initially positive and remained so during their participation in Summer PREP.

Based on the findings of the evaluation the following specific recommendations are made:

- The Division of High Schools should consider beginning recruitment for the summer program early in the spring term when student records are available and eligibility can be determined.

- The use of student mentors should be continued and perhaps expanded given their success as role models for summer PREP students. Perhaps a mechanism could be set up whereby mentors attending high school in the fall would continue to act as peer counselors to summer students entering the same high school in September.

- The methods used to assess the success of the summer program should be reassessed in terms of the degree to which they accurately measure the goals of the summer program; the testing program in particular should be scrutinized.

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I. INTRODUCTION

PROGRAM BACKGROUND

The Office of Educational Assessment/High School Evaluation Unit (O.E.A./H.S.E.U.) has evaluated the Summer High School Preparation for Raising Educational Performance (PREP) program since its inception in the summer of 1983. Summer High School PREP was designed to ease Chapter I-eligible* students' transition from junior to senior high school. Chapter I guidelines stipulate that any incoming ninth or tenth grade student from a public or private school who scores two or more years below grade level on a nationally normed reading or mathematics test is eligible to participate in the summer program. Limited English Proficient (LEP)** and special education students were also eligible although assessment of academic progress for these students is not part of this evaluation.***

The 1985 High School Summer PREP program operated for 22 days -- from July 2 to August 2, 1985 at 45 high schools. Morning sessions were devoted to hands-on instruction developed around a theme. Themes included fine arts, advertising, carpentry, and photography. They were intended to capture students' interest and challenge their creativity. Teachers incorporated the themes and their practical applications into students' communication

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* Chapter I eligibility is based on a complex formula which uses the proportion of a school's students who either qualify for the free lunch program or are members of families eligible for Aid to Families with Dependent Children.

** A student is classified as LEP if he or she scored below the 21st percentile on the Language Assessment Battery (LAB). The LAB is a norm-referenced test used to measure the basic English skills of students whose native language is not English.

*** The Office of Educational Assessment/Bilingual Evaluation Unit evaluated the LEP component of the Summer High School PREP program.

arts and mathematics classes. Students received three hours of instruction daily. Afternoon sessions included trips to cultural events, historical sites, and career-exploration locations as well as school-based activities such as shop, clubs, fine arts, and drama productions. Fiday afternoons were set aside for staff planning.

PROGRAM OBJECTIVES

The overall goals of the High School Summer PREP program are to ease students' transition into high school and to improve their attitudes toward school. The specific instructional goal is:

- Seventy percent of incoming ninth and tenth graders will demonstrate improvement in Normal Curve Equivalent (N.C.E.)* scores on norm-referenced reading and mathematics tests.

EVALUATION METHODOLOGY

The evaluation team collected both qualitative and quantitative data about the summer program. Qualitative data included surveys of 43 site supervisors, 422 teachers, 31 guidance counselors, 105 student mentors, and 134 student participants. Students also took a 25-item survey assessing their attitude toward school at the beginning and end of the program period. Quantitative data include summer 1985 program attendance, and pretest and posttest reading and mathematics scores.**

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* Normal curve equivalents (N.C.E.s) are similar to percentile ranks but, unlike percentile ranks, are based on an equal-interval scale. N.C.E.s are based on a scale ranging from one to 99 with a mean of 50 and a standard deviation of approximately 21. Because N.C.E.s are equally spaced apart, arithmetic and statistical calculations such as averages are meaningful; in addition comparisons of N.C.E.s may be made across different achievement tests.

** Students took the California Achievement Test, Level 18 in reading and the New York City Mathematics Test, Level 8 in math.

New York City public school students are traditionally tested in reading and mathematics every fall and spring. For the purpose of evaluating the summer program, the State Education Department (S.E.D.) directed that students' spring, 1985 reading and mathematics test scores be used as pretests and that posttests in the respective areas be administered at the conclusion of the summer program, three months later.

The program complied with the S.E.D.'s directive that norm-referenced tests be administered since it was a condition of program approval. Nevertheless, this type of testing is inappropriate in a short-term program because the tests are not normed for use in programs of short duration. As a result, test scores are reported in raw score units rather than in N.C.E.s.

SCOPE OF THIS REPORT

Program background and evaluation methodology appear in Chapter I. Program organization, staffing, student selection, recruitment, organization and staffing, counseling methods, and afternoon activities are presented in Chapter II; program outcomes are presented in Chapter III. The results of a student attitude survey are included in Chapter IV. Conclusions and recommendations are discussed in Chapter V.

II. PROGRAM IMPLEMENTATION

PROGRAM ORGANIZATION

The program operated at 45 school sites in all five boroughs. Program administrators attempted to assign students to the sites they would be attending in fall, 1985. However, because Summer PREP was available at only 45 of the city's 111 high schools, students enrolled in high schools that were not part of the summer program attended the Summer PREP site that was closest to the school they would be attending in the fall. Most summer sites were clustered with between one and four other non-Summer PREP high schools.

STAFFING

A central supervisor and two assistants were responsible for overall program coordination. In addition, 11 high schools principals served as itinerant supervisors overseeing the instructional program and supervising site supervisors and teachers at four high schoools apiece. The 45 site supervisors were appointed or acting assistant principals. They were responsible for the overall administration and supervision of the program at each school. Forty-five guidance counselors also participated in the program. Their duties included reviewing the records of all potential participants to assure Chapter I elgibility and verifying testing and immunization data. They also held large and small group counseling sessions with students dealing predominantly with topics such as career exploration and orientation to high school.

Nearly 500 teachers taught reading, writing, mathematics, and English as a second language using the theme-based approach. The program also hired

nearly 500 student mentors to assist teachers in the classroom and to provide academic assistance and peer guidance. Program administators hoped that mentors would continue to assist incoming students in September on a one-to-one basis. Each site also had the services of a secretary; three additional secretaries worked at the central office.

STUDENT RECRUITMENT

According to the guidance counselors interviewed, the most common methods of recruiting students for the summer program were articulation with the feeder schools and telephone or mail contact with prospective students (50 percent). Guidance counselors also placed ads in local newpapers, enrolled walk-ins, and asked participants to tell their friends about the program (17 percent). In addition, counselors screened applicants through student records and accepted referrals from other school staff (33 percent).

About one-third (32 percent) of the counselors indicated that student recruitment efforts differed from those used during the previous summer. The differences focused mainly on increased coordination and contact with feeder schools about the summer program and intensified follow-up contact with prospective students. The recruitment efforts described by counselors were corroborated by the students interviewed.

Eighty-one percent of the students indicated that they had heard about the summer program while school was still in session. Over one-half (52 percent) received a letter at home announcing the summer program; 10 percent received a letter at school; 11 percent of the students stated that a junior high school counselor told them about the program; and 10 percent were told by a friend. A few students (six percent) found out about Summer PREP from their parents.

Just over one-half (54 percent) of Summer PREP participants arrived without the records which would enable counselors to confirm their eligibility for the program. Even when records were available, however, they were frequently incomplete. Guidance counselors reported that 39 percent of the records they dealt with had incomplete attendance information; 64 percent had incomplete testing information; and 52 percent were missing immunization data. Because of the inadequate data available to guidance counselors, particularly with regard to test information, some students who participated in the summer program may have been ineligible according to Chapter I guidelines.

Forty-five percent of the students stated that they enrolled in Summer PREP because they wanted to find out what their new school would be like. Thirty-four percent enrolled because they wanted to do better in math, reading, or writing. The rest of the students questioned indicated that they chose to go to summer school to be with friends, to go on trips or to learn to speak better English.

PROGRAM REGISTER

Information supplied by the central supervisor indicates that the number of students registered in Summer PREP ranged from 7,602 on July 2nd to 10,213 on August 2nd, the last day of the program. The highest register occurred during the fourth week of the program when 10,578 students were enrolled. The average program register was 10,164 students.

Types of Students on Register

The evaluation team asked site supervisors the number of students

registered at their site as of July 8, 1985, the first full week of program operation. Registers ranged from 38 to 555 during the first week although 42 percent of the sites reported fewer than 200 students. Twenty-three percent of the sites indicated that they had no English as a second language (E.S.L.) students, 53 percent reported up to 50 E.S.L. students with the remaining sites reporting more than 50 E.S.L. students. The number of special education students averaged 20 per site and site supervisors reported from zero to 39 students at their sites.

ORGANIZATION AND STAFFING

Itinerant and Site Supervisors

Eleven itinerant supervisors each supervised four schools. They were responsible for:

- ensuring that the specific thematic program of each school reflected the overall goals of the Summer PREP program;
- setting standards for the quality of instruction in every classroom;
- providing training and support for each site supervisor; and
- monitoring and evaluating the progress of each program.

In contrast, site supervisors directed the day to day operations at their site. Eighty-eight percent of the site supervisors had worked in the summer program before. They collaborated with their respective itinerant supervisors to develop a theme which could be used to teach basic communication and math skills.

Teachers

Teachers averaged 13 1/2 years of experience. Eighty-two percent taught

in their Summer PREP site during the regular school year, teaching math (19 percent), English (16 percent), social studies (nine percent), biology (five percent), special education (five percent), and E.S.L. (three percent). Less than one-half (45 percent) taught Chapter I/P.S.E.N. basic skills classes during the regular school year. Nearly three-fourths (73 percent) had taught in the summer program before. Thirteen per-cent taught E.S.L. during the summer program and 26 percent were teaching special education students during Summer PREP.

Guidance Counselors

About three-fourths (74 percent) of the guidance counselors had taken part in the program the previous summer; 65 percent provided services to students at their summer site during the regular school year. On the average, counselors had about 10 years experience. Forty-two percent of those interviewed were bilingual; most often their second language was Spanish.

Student Mentors

Sixty-five percent of Summer PREP mentors were female. Most mentors were entering the eleventh (39 percent) or the twelfth (53 percent) grade in fall, 1985. They ranged in age from 14 to 19 with an average age of 16 1/2 years. Eighty-three percent reported a grade point average of 80 or above. Virtually all the mentors questioned intended to go to college. The subjects mentors listed most frequently as those they wanted to study in college were: computers (14 percent); medicine (13 percent); business (11 percent); accounting (six percent); and law (five percent).

Distribution of Staff

The average number of Summer PREP staff serving different types of students at each site is summarized in Table 1. As indicated, the average number of mainstream, E.S.L., and special education teachers per site was nine, two, and two respectively. Typically, one guidance counselor served all students at a site. The average number of mentors ranged from ten for mainstream classes to one for E.S.L. classes. An average of two mentors participated in special education classes. E.S.L. classes were the only ones that may have had the services of a bilingual paraprofessional.

Staff Planning

According to site supervisors, staff planning sessions usually focused on the coordination of instruction with trips (98 percent); thematic activities (95 percent); and afternoon activities (92 percent). Discussions also centered around ways of integrating E.S.L. (80 percent) and special education (73 percent) students into mainstream activities. Methods of teaching basic reading (66 percent), writing (75 percent), and math skills (62 percent) were frequent topics during staff planning sessions as well.

Teachers concurred with site supervisors' assessment of these sessions and added that sharing experiences (29 percent), discussing the needs of individual students (21 percent), maintaining staff morale (14 percent), and student interest (seven percent) were also often discussed. Teachers perceived staff planning (84 percent) and on-site afternoon activities (78 percent) as essential to the success of the summer program.

PROGRAMMING, INSTRUCTION, AND THEME INTEGRATION

Programming

Most sites divided their morning instructional program into three, or

TABLE 1

Average Number of Summer PREP Staff by Type of Class

Type of Class	STAFF							
	Teachers		Counselors		Mentors		Paraprofessionals	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Mainstream	9	0-16	1	0-2	10	1-18	*	0-3
E.S.L.	2	0-23	*	0-1	1	0-14	1	0-8
Special Education	2	0- 4	*	0-1	2	0- 4	0	0

* Mean was less than one.

- The average number of teachers ranged from nine in the mainstream program to two in both E.S.L. and special education.
- Few sites had bilingual paraprofessionals.

more commonly, four class periods. Class size averaged 18 students in mainstream classes, 17 students in E.S.L. classes, and 11 in special education classes.

The most commonly used methods of programming mainstream students were block programming (38 percent), theme (28 percent) or interest (19 percent). Other methods included programming by the high school the student would be entering in September or by grade level (seven percent). Some students (seven percent) were also programmed randomly. LEP students were usually programmed according to E.S.L. level (61 percent) or block programmed (19 percent) although programming by interest (six percent), theme (three percent) or by language group (three percent) were also used. Special education students were usually block programmed as well (39 percent). Other programming methods included according to needs (26 percent) or special education classification (23 percent). Interest (five percent), theme (five percent), randomly or by September high school (nine percent) were also used at some sites.

Instructional Focus

The evaluation team asked teachers to rate their instructional curriculum along several dimensions. According to these ratings, teachers believed their curriculum focused greatly on integrating basic skills with a particular theme (88 percent). Teachers nearly as often focused their entire instructional curriculum around a particular theme (85 percent). Approximately three-fifths of the teachers indicated that their curriculum focused on basic reading (62 percent), writing (60 percent), or math (57 percent) skills. Nearly one-half of the teachers focused on improving English proficiency for E.S.L. students (48 percent) or basic skills for special education students (49 percent).

Although site supervisors listed over 70 different subjects offered in the summer program, English, math, reading, computers, and health careers were the most common subjects offered to all types of students. These were also the subjects that students listed as their most favorite. Students enjoyed these classes primarily because they liked the subject (34 percent), the teacher (13 percent), or the hands-on activities (13 percent). Most students also believed that they had improved in reading (81 percent); writing (75 percent); and math (75 percent) as a result of the summer program.

Theme Integration

The number of themes ranged from one to five per site. Some schools such as Far Rockaway used a single theme (Health Careers) for their entire program while others such as August Martin offered a program with multiple themes (Aerospace, TV communications, computer literacy, law studies, and ground vehicle maintenance). The most common themes were career or computer related. Virtually, all site supervisors indicated that themes were integrated into the instructional programs of mainstream, E.S.L., and special education students. Teachers most often integrated themes into their curriculum in class discussions, vocabulary lessons, and lectures (36 percent). Other teachers integrated themes primarily through discussions of the career possibilities within a particular discipline (13 percent).

According to site supervisors, summer PREP themes were most effective in increasing student motivation (91 percent); maintaining attendance (86 percent); and improving basic skills (86 percent). Themes were less effective in improving English proficiency for E.S.L. students (51 percent effective) or in offering career preparation (70 percent effective).

COUNSELING

Individual Counseling

Guidance counselors reported that they saw an average of 15 students a week individually. These students almost always asked to see the counselor or were referred (97 percent). Counselors met with some students because of special needs they identified from students' records (45 percent) or because guidance counselors structured their work in Summer PREP around individual counseling sessions (36 percent). Counselors spoke to some students individually at their parents' request.

Individual counseling sessions focused most frequently on motivating students to improve attendance (87 percent) and academic achievement (77 percent). Guidance counselors also used these sessions to provide students with an orientation to high school (71 percent); to help students cope with personal problems (71 percent); and to give students information necessary for planning educational and career goals (42 percent).

Guidance counselors estimated that about 16 percent of their caseloads were special education students and about 11 percent were E.S.L. students. The more than one-half of the guidance counselors who were not bilingual counseled LEP students by having a bilingual student mentor (39 percent) or paraprofessional (23 percent) translate. Other methods involved relying on the English that LEP students knew (29 percent) or using phrases in the students' native language (29 percent) that the counselor might have picked up. Twenty-one percent of the students surveyed indicated that they had spoken to a counselor alone during the summer program.

Group Counseling

All but one of the counselors questioned held group counseling sessions as well. Counselors averaged six group sessions per week in which seven to 38 students participated. The average size of the group was 16 students. Topics involved high school requirements and information (38 percent); values clarification and self awareness (38 percent); high school orientation (16 percent); and career or future plans (eight percent).

About 70 percent of the counselors held separate group counseling sessions for E.S.L., special education, and mainstream students. These counselors believed that group counseling sessions had to be tailored differently because of language barriers and problems they perceived in the maturity level of some E.S.L., and special education students. Although counselors might discuss the same issues as they did with mainstream students, their presentations were geared toward the particular needs of LEP and special education students in these sessions. Over one-half (54 percent) of the students surveyed had participated in a group session led by a guidance counselor.

ROLE OF STUDENT MENTORS

According to guidance counselors, student mentors most often helped students with math (93 percent), reading (87 percent), and writing (83 percent). These duties were followed by acting as peer counselors (74 percent), and assisting teachers in administrative matters (70 percent). Mentors also assisted counselors in administrative matters (39 percent); translated during meetings between LEP students and English-speaking staff (33 percent); and translated material into LEP students' native language (33 percent).

Mentors concurred with guidance counselors' assessments of their duties. Eighty-six percent of the mentors said that they provided academic assistance to students; 72 percent said that they assisted teachers with administrative matters, and 50 percent indicated that they acted as peer counselors. When asked specifically about the types of counseling they provided to students, mentors, were most likely to say that they told students about their own experiences in high school (74 percent), gave students information about life in high school (74 percent), and directed students to the appropriate person to answer their questions (65 percent). Mentors estimated that they worked with an average of 39 students weekly.

Ninety-two percent of the students indicated that they had spoken to a student mentor at least once. Over two-thirds (69 percent) talked to mentors four or more times. As noted by mentors, these conversations usually focused on the mentors' experiences in high school (47 percent). Mentors also frequently gave students specific information about high school (48 percent) or helped students with their reading or math work (34 percent).

AFTERNOON ACTIVITIES

Virtually all teachers (93 percent) stated that trips were very important to the success of the summer program. Over three-fourths (78 percent) of the teachers believed that trips taught students about resources outside of their own neighborhoods; 74 percent stated that trips motivated students to attend school, and 73 percent perceived trips as important in generating enthusiaism for cultural activities. Students indicated that the afternoon activities they enjoyed best were trips (20 percent), sports (15 percent), movies (13 percent), and computer activities (nine percent).

III. PROGRAM OUTCOMES

O.E.A. obtained data for 9,574 students who participated in the Summer 1985 High School PREP Program. Twenty-six percent of these students were listed as LEP while another ten percent were identified as special education students. LEP and special education students were exempt from testing and thus are not included in any of the reading and mathematics results. Forty-one percent of the students who were tested had both pretest and posttest reading scores (2,429); 34 percent had complete mathematics scores (1,986).

Grade information was available for 37 percent of the Summer PREP participants required to be tested. According to these data, 73 percent of the students were entering grade nine in September and 26 percent indicated that they would be entering grade ten in the fall. Grades other than nine or ten were listed for the remaining one percent of students.

Attendance

Ninety-three percent of the 9,574 students who participated in 1985 Summer PREP had valid attendance data. These students attended an average of 17 of the 22 days (77 percent) that the program was in session. The attendance of students with complete test results was slightly higher; they attended an average of 19 days (86 percent).

Reading and Math Improvement

Reading and math improvement were assessed using pretest and posttest raw scores. Only the results of incoming ninth graders are used to assess the program's objectives because only incoming ninth graders were pre-and-posttested on the same reading and mathematics tests. This situation occurred because the citywide tests used as the pretest differ depending

upon students' grade level and only a single posttest was given in reading (California Achievement Test Level 18) and in math (New York City Mathematics Test, Level 8) at the end of Summer PREP. Both incoming ninth grade students' reading and mathematics test scores declined from the April pretest to the August posttest. Math scores showed an average drop of 5.8 raw score points from 62.7 (S.D. = 19.6) to 56.9 (S.D. = 21.1) and reading scores dropped an average of 5.3 raw score points from 40.1 (S.D. = 10.9) to 34.5 (S.D.= 11.1).

Despite the difficulties in interpreting these test results, O.E.A./H.S.E.U. examined the program's reading and math score objectives. The Summer PREP program objective stipulated that 70 percent of the students would show improvement in their reading and mathematics N.C.E. scores as a result of program participation. However, O.E.A./H.S.E.U. chose to assess the program objective using raw scores because the use of N.C.E.s is not meaningful in a program of such short duration. This raw score analysis indicated that the program's objective was not met: only about 22 percent of incoming ninth graders' reading scores and 28 percent of their math scores improved from the pretest to the posttest.

Summary

Several factors relating to the way program success was measured in the Summer PREP program affected the interpretation of quantitative outcomes. In terms of attendance, students were present about 77 percent of the time for the duration of the program. An attendance rate of this magnitude during the summer months is considered high relative to the rates attained in previous summer programs. Regarding test scores, tests normed on a full-year cycle may be inappropriate measures of academic progress in a short-

term program. More fundamentally, it may be unreasonable to expect measurable changes in reading and mathematics test scores as a result of a 22 day summer program in which students received three hours of instruction a day.

IV. STUDENT ATTITUDE SURVEY

A 25-item attitude survey, designed to assess students' attitudes toward school, was administered to 6,628 students during the first week of Summer PREP 1985 and to 2,195 students during the program's final week. Students indicated the extent to which they agreed with each survey item on a four-point scale ranging from "strongly agree" to "strongly disagree." Preprogram and postprogram surveys were matched by student identification numbers. O.E.A. analyzed the attitude surveys of students who completed both surveys. A principal components analysis with a varimax rotation was undertaken, with pretest data, to group similar survey items.* A list of the specific survey items and how they were grouped is contained in the Appendix. They were grouped under the following six categories:

- general attitudes toward high school (items 4, 6, 9, 14, 18, 19, 22, 25);
- apprehensions about attending a new school (items 3, 12, 15 17, 24);
- the importance of basic skills for employment (items 1, 10, 13, 16, 21);
- interest in learning (items 2, 5, 19, 22, 25);
- knowledge of high school curricula and regulations (items 8, 20, 23); and
- academic self-confidence (items 7, 11).**

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* From this analysis, six components were retained; each with an eigenvalue greater than one. These six components accounted for 42 percent of the total variance.

** In describing factors, items with factor loadings above 0.3 were retained, except if an item loaded or more than one factor in which case a loading of 0.4 was required for the second factor on which the item loaded. By this criteria only one item, number 19, "I plan to go to college," loaded on more than one factor."

Pretest and posttest scores for each factor were computed. Results of this analysis are illustrated in Table 2. Scores for each factor could range from one to four, where one stood for the most positive attitude and four for the most negative attitude. Scores for all factors both pretest and posttest, were all under 2.5 indicated that students had positive attitudes at the start of the program and that these attitudes remained positive (effect sizes less than 0.2).*

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* The effect size (E.S.), developed by Jacob Cohen, is the ratio of the mean gain to the standard deviation of the gains. This ratio provides an index of improvement in standard deviation units irrespective of the size of the sample. According to Cohen, 0.2 is a small E.S., 0.5 is a moderate E.S.; and 0.8 is considered to be a large E.S. Only effect size of 0.8 and above are considered to be educationally meaningful.

TABLE 2

Pretest and Posttest Attitude Survey Scores of a Sample of Summer PREP Students

Factors	N	Pretest[a] Score	Posttest[a] Score	Difference	Effect Size
General Attitudes Towards High School	1,925	1.43	1.44	.01	.03
Apprehension about Attending a New School	1,940	2.29	2.21	-.08	-.17
Interest in Learning	1,992	1.92	1.86	-.06	-.16
The Importance of Basic Skills for Employment	1,984	1.79	1.78	-.01	-.02
Knowledge of High School Curricula and Regulations	1,977	2.08	2.09	.01	.02
Academic Self-Confidence	2,158	2.07	2.03	-.04	-.07

[a] Students responded on a scale ranging from one (strongly agree) to four (strongly disagree).

[b] The effect size (E.S.), developed by Jacob Cohen, is the ratio of the mean gain to the standard deviation of the gains. This ratio provides an index of improvement in standard deviation units irrespective of the size of the sample. According to Cohen, 0.2 is a small E.S., 0.5 is a moderate E.S.; and 0.8 is considered to be a large E.S. Only effect size of 0.8 and above are considered to be educationally meaningful.

- Overall attitudes for all factors were generally positive both before and after Summer Prep.
- Attitudes for Apprehension about Attending a New School, the Importance of Basic Skills for Employment, and Academic Skills improved slightly during Summer Prep.

V. CONCLUSIONS AND RECOMMENDATIONS

The instructional goal that 1985 Summer PREP participants demonstrate improvement in norm-referenced reading and mathematics test scores was not met. However, these findings are equivocal at best given the testing program. A testing schedule that relies on norm-referenced testing in a program of short duration is inappropriate because the tests used to assess progress are not normed for use in less than full-year programs.

Although the proportion of students sampled was small (134) in comparison to the number of students enrolled in Summer PREP, the data collected suggest that some attention should be paid to the lack of individual and, to a lesser degree, group counseling reported by students in the sample. The use of student mentors, continues to be a positive aspect of the summer program. Mandated staff planning, theme integration, and trips were all shown to be important components of the summer program as well.

Based on the findings of the evaluation the following specific recommendations are made:

1. The Division of High Schools should consider beginning recruitment for the summer program early in the spring term when student records are available and eligibility can be determined.

2. The use of student mentors should be continued and perhaps expanded given their success as role models for summer PREP students. Perhaps a mechanism could be set up whereby mentors attending high school in the fall would continue to act as peer counselors to summer students entering the same high school in September.

3. The methods used to assess the success of the summer program should be reassessed in terms of the degree to which they accurately measure the goals of the summer program; the testing program in particular should be scrutinized.

APPENDIX

Survey Items Administered to Summer Prep Students by Attitude Factor

Survey Items	Factor Loading
General Attitudes About High School	
I expect to graduate from high school.	.65
I need a high school diploma for the type of job I want.	.61
Knowing how to read well is an important skill to have for the type of job I want. In the long run, it pays to go to school every day.	.56 .54
The courses I take in school will help me to get a good job. I plan to go on to college.	.49 .44
Apprehensions Concerning Attending a New School	
I worry about the trip to high school.	.64
I feel shy about asking questions in class.	.64
I worry about being hurt by other high school students.	.62
I don't know much about what goes on in high school.	.50
When I start high school in September, I won't have any friends there.	.54
Interest In Learning	
I like going to school.	.71
Reading is an enjoyable way for me to spend my spare time.	.62
I plan to go on to college.	.47
Guidance counselors are very helpful.	.39
You can't do well in school unless you go every day.	.32
The Importance of Basic Skills for Employment	
Using math in projects like baking a cake and building a table makes math easy to understand.	.60
Knowing how to write well is important for the type of job I want.	.48
Knowing a lot of math is important for the type of job I would like to get.	.56
If I have trouble with school work I will go to older students for help.	.44
Knowing math is necessary for a lot of things like going shopping.	.40
Knowledge of High School Curriculum and Regulations	
I know which courses I would like to take in September.	.76
I don't know which classes to take in high school.	.59
I know the procedures I have to follow when I start high school.	.50
Academic Self-Confidence	
I can do math problems without anyone helping me.	.81
I think I'm prepared to do high school work.	.49

* The survey items fell into six major categories on the basis of a factor analysis.